

DRAFT

**CONSULTANT SERVICES AGREEMENT
BETWEEN THE CITY OF SUNNYVALE AND
ADVANCED ENGINE TECHNOLOGIES CORPORATION (AETC) FOR
ENGINE MAPPING AT THE SUNNYVALE POWER GENERATION FACILITY**

THIS AGREEMENT dated _____ is by and between the CITY OF SUNNYVALE, a municipal corporation ("CITY"), and ADVANCED ENGINE TECHNOLOGIES CORPORATION (AETC), a California corporation ("CONSULTANT").

WHEREAS, CITY is in need of specialized services in relation to engine mapping to establish key operating parameters for the two (2) Caterpillar diesel engines at the Sunnyvale Power Generation Facility (PGF) in order to meet BAAQMD 8-34-509 operating regulations; and

WHEREAS, CONSULTANT possesses the skill and expertise to provide the required services;

NOW, THEREFORE, THE PARTIES ENTER INTO THIS AGREEMENT.

1. Services by CONSULTANT

CONSULTANT shall provide services in accordance with Exhibit "A" attached and incorporated by reference. CONSULTANT shall determine the method, details and means of performing the services.

2. Time for Performance

The term of this Agreement shall be for thirty (30) calendar days, effective upon contract execution, unless otherwise terminated. Extensions of time may be granted by the City Manager upon a showing of good cause.

3. Duties of CITY

CITY shall supply any documents or information available to City required by CONSULTANT for performance of its duties. Any materials provided shall be returned to CITY upon completion of the work.

4. Compensation

CITY agrees to pay CONSULTANT at the following milestone schedule:

- a) 25% upon receipt of CITY issued Purchase Order.
- b) 60% upon completion of Phase 2 of Scope of Work.
- c) 15% upon completion of Final Report.

Total compensation shall not exceed Eighty Three Thousand Three Hundred Ninety and No/100 Dollars (\$83,390.00). Payment shall be made within thirty (30) days upon receipt of an accurate, itemized invoice by CITY's Accounts Payable Unit.

5. Ownership of Documents

CITY shall have full and complete access to CONSULTANT's working papers, drawings and other documents during progress of the work. All documents of any description prepared by CONSULTANT shall become the property of the CITY at the completion of the project and upon payment in full to the CONSULTANT. CONSULTANT may retain a copy of all materials produced pursuant to this Agreement.

6. Conflict of Interest

No officer or employee of CITY shall have any interest, direct or indirect, in this Agreement or in the proceeds thereof. During the term of this Agreement CONSULTANT shall not accept employment or an obligation which is inconsistent or incompatible with CONSULTANT's obligations under this Agreement.

7. Confidential Information

CONSULTANT shall maintain in confidence and at no time use, except to the extent required to perform its obligations hereunder, any and all proprietary or confidential information of CITY of which CONSULTANT may become aware in the performance of its services.

8. Compliance with Laws

- (a) CONSULTANT shall not discriminate against any employee or applicant for employment because of race, religion, creed, color, national origin, gender, age (persons 40 years or older), disability, or any other basis to the extent prohibited by federal, state, or local law. All employees of CONSULTANT shall be treated during employment without regard to their race, creed, color or national origin.
- (b) CONSULTANT shall comply with all federal, state and city laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Agreement.

9. Independent Contractor

CONSULTANT is acting as an independent contractor in furnishing the services or materials and performing the work required by this Agreement and is not an agent, servant or employee of CITY. Nothing in this Agreement shall be interpreted or construed as creating or establishing the relationship of employer and employee between CITY and CONSULTANT. CONSULTANT is responsible for paying all required state and federal taxes.

10. Indemnity

CONSULTANT shall indemnify, defend, and hold harmless the CITY, its officers, officials, employees and volunteers from and against all claims, damages, losses and expenses, including attorney fees, arising out of the performance of the services described in Exhibit "A", caused in whole or in part by any negligent act or omission of CONSULTANT, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except where caused by the active negligence, sole negligence or willful misconduct of the CITY.

11. Insurance

CONSULTANT shall take out and maintain during the life of this Agreement policies of insurance as specified in Exhibit "B" attached and incorporated by reference, and shall provide all certificates and endorsements as specified in Exhibit "B".

12. CITY Representative

Dan Hammons, WPCP Maintenance & Facility Manager, as the City Manager's authorized representative, shall represent CITY in all matters pertaining to the services to be rendered under this Agreement. All requirements of CITY pertaining to the services and materials to be rendered under this Agreement shall be coordinated through the CITY representative.

13. CONSULTANT Representative

Greg Beshouri, President, shall represent CONSULTANT in all matters pertaining to the services and materials to be rendered under this Agreement; all requirements of CONSULTANT pertaining to the services or materials to be rendered under this Agreement shall be coordinated through the CONSULTANT representative.

14. Notices

All notices required by this Agreement shall be in writing, and shall be personally delivered, sent by first class with postage prepaid, or by sent by commercial courier, addressed as follows:

To CITY: Dan Hammons, PW/Environmental Services
 Water Pollution Control Plant
 CITY OF SUNNYVALE
 P. O. Box 3707
 Sunnyvale, CA 94088-3707

To CONSULTANT: Greg Beshouri, President
 Advanced Engine Technologies Corporation (AETC)
 464 McCormick Street
 San Leandro CA 94577

Nothing in this provision shall be construed to prohibit communication by more expedient means, such as by telephone or facsimile transmission, to accomplish timely communication. However, to constitute effective notice, written confirmation of a telephone conversation or an original of a facsimile transmission must be sent by first class mail or commercial carrier, or hand delivered. Each party may change the address by written notice in accordance with this paragraph. Notices delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated as of two days after mailing, unless such date is a date on which there is no mail service. In that event communication is deemed to occur on the next mail service day.

15. Assignment

Neither party shall assign or sublet any portion of this Agreement without the prior written consent of the other party.

16. Termination

If CONSULTANT defaults in the performance of this Agreement, or materially breaches any of its provisions, CITY at its option may terminate this Agreement by giving written notice to CONSULTANT. If CITY fails to pay CONSULTANT, CONSULTANT at its option may terminate this Agreement if the failure is not remedied by CITY within thirty (30) days from the date payment is due.

Without limitation to such rights or remedies as CITY shall otherwise have by law, CITY also shall have the right to terminate this Agreement for any reason upon ten (10) days' written notice to CONSULTANT. In the event of such termination, CONSULTANT shall be compensated in proportion to the percentage of services performed or materials furnished (in relation to the total which would have been performed or furnished) through the date of receipt of notification from CITY to terminate. CONSULTANT shall present CITY with any work product completed at that point in time.

17. Entire Agreement; Amendment

This writing constitutes the entire agreement between the parties relating to the services to be performed or materials to be furnished hereunder. No modification of this Agreement shall be effective unless and until such modification is evidenced by writing signed by all parties.

18. Miscellaneous

Time shall be of the essence in this Agreement. Failure on the part of either party to enforce any provision of this Agreement shall not be construed as a waiver of the right to compel enforcement of such provision or any other provision. This Agreement shall be governed and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties have executed this Agreement.

ATTEST:

CITY OF SUNNYVALE ("CITY")

City Clerk

City Manager

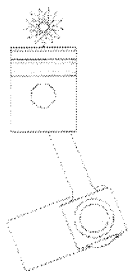
APPROVED AS TO FORM:

ADVANCED ENGINE TECHNOLOGY
CORPORATION (AETC)
("CONSULTANT")

City Attorney

Name/Title

EXHIBIT A



ADVANCED ENGINE TECHNOLOGIES CORP.

Ushering Reciprocating Engines into the 21st Century

Tuning and Emissions Project to determine Key Operating Parameters for Emission Control. (To meet BAAQMD 8-34-509)

Prepared for:

City Of Sunnyvale WPCP
PO Box 3707
Sunnyvale CA 94088-3707

Prepared by:

Advanced Engine Technologies Corporation
464 McCormick Street
San Leandro, CA 94577

REV2.2
11 May 2006

This proposal is to be returned upon written request by Advanced Engine Technologies Corporation.

1 Statement of Objectives

Based on the proposal request and correspondence from The City of Sunnyvale WPCP (dated January 18th 2005) the objective is to increase the range of operation of two CAT 3516 IC engines, and establish key operating parameters to determine emissions to meet BAAQMD 8-34-509 regulations.

2 Problem Description

To determine key emission control system operating parameters for both CAT 3516's based upon BAAQMD regulations. Currently, the CATS remain in compliance under full load conditions; however, under varying loads, the engines require a richer fuel blend resulting in out of permit range emissions thereby increasing the cost of operation and compliance. AETC's objective is to increase the operational range and retain unit stability while remaining within emission limitations set by the operating permit.

3 Qualifications

AETC is a local engineering company located in San Leandro, CA dedicated to providing turnkey solutions and engineering support services to customers operating slow and medium speed engines in power generation, wastewater treatment, natural gas pipeline, and marine service.

4 Proposal Summary

AETC is pleased to propose the following approach and solution to achieve Client's objectives:

1. Optionally initiate Regulatory review by Justice and Associates (Regulating advocates)
2. Tune Geco and Governor to meet BAAQMD emission requirements over requested operational range (400 – 800kW)
3. Tune the Geco and Governor to meet engine stability requirements from idle to 400 kW
4. Fuel blend
 - a. 70 % Land fill
 - b. 15% Digester Gas
 - c. 15% Air / natural gas blend
5. Map both units for each fuel blend, varying loads and air fuel ratio (ϕ). Fuel samples will be taken at each load (up to 4 per unit) and sent for analysis.
6. Reduce the data obtained and optimize the map
7. Define optimum monitor method and reporting.
8. Make recommendations for follow on monitoring methods.
9. Train O&M personnel to recognize when CAT's are out of compliance and deploy a standard set of corrective measures.

10. Issue a final report and make recommendations for future cost effective monitoring strategies.

5 Scope of Work Summary

AETC will provide the following services in support of this scope of work:

1. AETC will optionally retain Justice and Associates to review upon Client's request and approval, interpret the permit and make recommendations for actions required to meet permit levels.
2. AETC's will install an emissions trailer on site to sample and monitor exhaust gases in preparation for engine mapping.
3. AETC will tune the Geco and governor to meet permitted emissions and stable unit operation in the requested range of 400kW – 800kW.
4. AETC will tune the Geco and governor to maintain stable unit operation in the requested range from idle to 400kW.
5. Units will be mapped by AETC across three loads, 3 ϕ 's and for each fuel blend (* As defined in section 4 proposal summary).
6. Fuel samples will be taken at the load points and send for analysis.
7. Resultant data will be reduced to determine an optimization map.
8. AETC will use the optimization maps to prepare, recommend and report on the optimum monitor method and control strategies required to meet the BAAQMD 8-34-509 requirements.
9. AETC will train the O&M personnel to diagnose and correct out of compliance issues and make recommendations for future cost effective monitoring strategies.

6 Detailed Scope of Work

6.1 Phase I

Request a review and comment from Justice and Associates for your current operating permit. Concurrently, AETC will install the emissions trailer at Sunnyvale to start mapping as soon as possible on unit 1. The following tasks will be performed:

- Map unit 1 for each fuel blend to determine the current operating conditions
- Tune the GECO and Governor to achieve permitted emissions and stability over the requested range
- Map unit 1 to confirm engine is operating over the required range and within the BAAQMD permit

6.1.1 Deliverables

- Prepare Test report to confirm unit 1's operation is within the operating boundary.

6.2 Phase 2

AETC will temporarily install the emissions probe over to the second stack, ready to start mapping on unit 2.

- Map unit 2 for each fuel blend to determine the current operating conditions
- Wet samples of the fuel blend will be taken for analysis at each point to determine the precise fuel composition.
- Tune the GEICO and Governor to achieve permitted emissions and stability over the requested range. (Idle to 400kW and to meet emissions from 400kW - 800kW).
- Map unit 2 to confirm engine is operating over the required range and within the BAAQMD permit. (400kW to 800kW)

6.2.1 Deliverables

- Prepare Test report to confirm unit 2's operation is within the operating boundary.

6.3 Final Report

Definition and delivery of the operating parameters for both units together with look up tables that can be used to determine emissions.

AMP / kW and
Fuel flow / kW per fuel blend

Additionally, AETC will make recommendations on technology to help the City of Sunnyvale to meet and maintain the permit regulations enforced on by the BAAQMD.

7 Duration and cost

7.1.1 Project Cost

AETC will provide the scope of work on a Time and Material basis to be billed at AETC's prevailing rates attached hereto. AETC estimates this effort to cost \$80,390. AETC recommends Client incorporate a 15-20% budgetary contingency to cover additional costs that may arise. In the event Client approves retaining Justice & Associates for Regulatory Interpretation, those costs will be passed through to Client at an estimated price not to exceed \$3,000.

7.1.1.1 Project duration

AETC will require access to the facility for approximately 3 weeks for setting up, mapping and removal of the trailer.

7.1.1.2 Setup

Estimated Setup time is ~1 day per unit.

7.1.1.3 Mapping

One week for mapping and tuning each unit plus an additional week to confirm unit operation after the changes have been made. This additional week will only be required for unit one.

7.1.1.4 Report

The report and tables will follow within one calendar month after leaving the site, at this time AETC will provide 1 day of training on the use of the above mentioned tables to determine emission will be given.

7.1.2 Training

Training will be presented to the City of Sunnyvale engineers to cover all engineering shifts as required over two consecutive days. The dates are to be agreed upon by AETC at the facility. Additional training will be billed at AETC's standard hourly the rates.

7.1.2.1 Training Agenda

- An overview of emission information in lean burn engines.
- The effect of engine parameters on emission formation and how to monitor these parameters
- Use of tabular data to verify engine emissions compliance for at a given operation point

7.1.3 Terms of Payment

Invoices for Engineering effort and related expenses will be billed per the following milestone schedule:

- 1) 25% upon receipt of Client Purchase Order
- 2) 60% upon completion of Phase 2

- 3) 15% upon completion of Final Report.

Invoices are due within fifteen (15) days of the invoice date thereon.

8 Prerequisites

8.1 Trailer Requirements

AETC's emissions trailer requires the following services to be provided by Sunnyvale;

3 Phase wye connected power at 20A 120/208VAC 60Hz
Air - Shop Service is OK, instrument preferred. 120# @ 5GPM
Sheppard's Hook for sampling
Umbilical length- 50' (Distance from trailer to Stack)

9 Client Responsibilities

Client will designate an individual authorized to resolve questions and coordinate the customer responsibilities. The client responsibilities include but are not limited to the following:

- A. Primary interface, coordination, compliance with regulations, permits and payment of fees are the responsibility of Client unless otherwise expressed herein as the responsibility of AETC.
- B. Provide, operate and maintain all standard services to this facility, such as electric power, including lighting, water, air, etc. Backup for these systems is not quoted in this proposal. These services are to be made available to AETC.
- C. Client will be responsible for environmental conditions and will keep the equipment free of contaminants that would be detrimental to the performance of the equipment.
- D. Client shall provide one (1) copy of existing system schematics, drawings, software, and other equipment/site data and be responsible for the accuracy of same and verbal information concerning existing conditions and wiring. Any work scope changes encountered due to inaccurate information may be subject to an increase in estimated costs.
- E. Prior to the start of work, Client shall familiarize AETC personnel with their safety practices, regulations in effect at jobsite, and any chemical and physical hazards, including process safety issues associated with the work environment.
- F. Client shall maintain existing equipment in a condition that allows AETC to carry out the scope of work described herein.
- G. Client is responsible for the removal and replacement of any obstructions that may interfere with access to or removal of the existing equipment.

EXHIBIT B

CITY OF SUNNYVALE INSURANCE REQUIREMENTS

SUPPLIER shall obtain, at its own expense and from an admitted insurer authorized to operate in California, the insurance coverage detailed below and shall submit Certificate(s) of Insurance to the City of Sunnyvale, Purchasing Division, 650 West Olive Ave, PO Box 3707, Sunnyvale, CA 94088-3707; fax (408) 730-7710.

SUPPLIER shall take out and maintain during the life of the contract **Workers' Compensation** insurance coverage to statutory limits as may be required by law.

SUPPLIER shall take out and maintain during the life of the contract such **Commercial General Liability Insurance** as shall protect SUPPLIER, CITY, its officials, officers, directors, employees and agents from claims which may arise from services performed under the contract, whether such services are performed by SUPPLIER, by CITY, its officials, officers, directors, employees or agents or by anyone directly or indirectly employed by either. The amount of insurance shall not be less than the following: Single Limit Coverage Applying to Bodily and Personal Injury Liability and Property Damage: \$1,000,000.

The liability insurance shall include, but shall not be limited to:

- Protection against claims arising from bodily and personal injury and damage to property, resulting from SUPPLIER's or CITY's operations and use of owned or non-owned vehicles.
- Coverage on an "occurrence" basis.
- Broad form property damage liability. Deductible shall not exceed \$5000 without prior written approval of CITY.
- Notice of cancellation to CITY's Purchasing Division at least thirty (30) days prior to the cancellation effective date.

The following endorsements shall be attached to the liability insurance policy, and copies shall be submitted with the Certificate(s) of Insurance:

- The policy must cover complete contractual liability. Exclusions of contractual liability as to bodily injuries, personal injuries and property damage must be eliminated.
- "CITY, its officers, officials, employees and volunteers" must be named as an additional named insured with respect to the services being performed under the contract. *Simply indicating on the certificate that the certificate holder is named as additional insured is not acceptable; an endorsement must be provided.*
- The coverage shall be primary insurance so that no other insurance effected by CITY will be called upon to contribute to a loss under this coverage.